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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,515	10/12/2001	Mercedes Gil	05288.P006	3926

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Robert B. O'Rourke
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER

PHAN, RAYMOND NGAN

ART UNIT

PAPER NUMBER

2111

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,515

Applicant(s)

GIL ET AL.

Examiner

Raymond Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,8,16,25,28,29,32,40,49,52,53,56,64,73,78 and 80 is/are rejected.
- 7) ☒ Claim(s) See Continuation Sheet is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims objected to are 2,3,6,7,9-15,17-24,26,27,30,31,33-39,41-48,50,51,54,55,57-63,65-72,74,76,77 and 81.

Part III DETAILED ACTION

Notice to Applicant(s)

1. This action is responsive to the following communications: pre-amendment filed on July 29, 2003.
2. This application has been examined. Claims 1-81 are pending.
3. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2111.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

5. Claims 2-3, 6, 26-27, 30, 50-51, 53, 74, 76 are objected.
As per claims 2-3, 6, 26-27, 30, 50-51, 53, 74, 76, , using the acronym, "...VL15...", are not defined in the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1, 4-5, 8, 16, 25, 28-29, 32, 40, 49, 52-53, 56, 64, 73, 78, 80 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pettey et al. (US No. 6,549,712) in view of Susnow (US No. 6,594,329).

In regard to claims 1, 25, 49, 73, Pettey et al. disclose an input port to a switching core comprising an input policy unit that checks if a virtual lane has sufficient number of credits to carry an input packet being received by the input switching unit (see col. 8, line 8 through col. 9, line 32); a request manager that generates a request for the packet to be switched by the switching core (see col. 8, line 8-65); and a pointer RAM manager that provides addresses of free blocks of data within the memory to the packet Rx unit and receives addresses of free blocks of data within the memory from the packet Rx unit (see col. 11, line 38 through col. 12, line 65). But Pettey et al. do not specifically disclose a packet receiver unit that stores the packet into a memory by writing blocks of data into the memory; a packet transmitter unit that receives a grant in response to the request and read the packet from the memory in response to the grant by reading the block of data. However Susnow discloses a packet receiver unit that stores the packet into a memory by writing blocks of data into the memory (see col. 6, line 19 through col. 7, line 4); a packet transmitter unit that receives a grant in response to the request and read the packet from the memory in response to the grant by reading the block of data (see col. 7, line 56 through col. 8, line 48). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Susnow within the system of Pettey et al. because it would prevent data corruption in data transfer.

In regard to claims 4, 28, 52, Susnow discloses the partition the packet belongs to if the packet belongs to a partition (see col. 5, lines 41-65). Therefore,

it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Susnow within the system of Pettey et al. because it would prevent data corruption in data transfer.

In regard to claims 5, 29, 53, 75, Pettey et al. disclose wherein the request can be generated by the request manager before the packet is completely stored into the memory (see col. 19, lines 24-67).

In regard to claims 8, 32, 56, 78, Susnow discloses wherein the packet Rx unit asks the request manager for one address for a free block within the memory for each one of the blocks of data that are written into the memory (see col. 6, line 19 through col. 7, line 4). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Susnow within the system of Pettey et al. because it would prevent data corruption in data transfer.

In regard to claims 16, 40, 64, 80, Pettey et al. disclose wherein the input port further comprises a pointer RAM to store a link list of those address of the memory used to store the packet within the memory, the pointer RAM also to store a link list of those addresses of the memory that are free blocks of data within the memory, both of the link lists maintained by the point RAM manager (see col. 7, line 56 through col. 8, line 48).

Allowable Subject Matter

8. Claims 2-3, 6-7, 9-15, 17-24, 26-27, 30-31, 33-39, 41-48, 50-51, 54-55, 57-63, 65-72, 74, 76-77, 81 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 2-3, 6-7, 9, 14-15, 17, 24, 26-27, 30-31, 33, 38-39, 41, 48, 50-51, 54-55, 57, 62-63, 65, 72, 74, 76-77, 79, 81 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach wherein, if the packet is a VL15 packet, the input policing unit does not check if a virtual lane has a sufficient number of credits (claims 2, 26, 50); wherein the request further comprising information from the packet header including whether or not the packet is a VL15 packet, service level of the packet (claims 3, 27, 51, 74); generating a request in response to the packet being recognized as a VL15 packet; generating a request in response to identifying a partition to which the packet belongs to (claims 6, 30, 54, 76); wherein the grant may be received by the packet Tx unit before the packet is completely stored into the memory and as a consequence, the packet Tx unit will begin to read the packet from the memory before the packet is completely stored in the memory (claims 7, 31, 55, 77); wherein the memory further comprising a plurality of individual RAMs, the packet Rx unit configured to utilize a block of data's corresponding address for a free block at each of the individual RAMs while writing the block of the memory (claims 9, 33, 57, 78,); wherein the input port further comprises Error RAM, the packet Rx unit configured to write to the Error RAM, for each block of data that is written into the memory, to indicate whether the block of data has an error (claims 14, 38, 62); wherein the input port comprising a Virtual Lane RAM, the packet configured to write to the Virtual Lane RAM, for each block of data from the packet that is written into the memory, to indicate the virtual lane that the packet traveled across (claims 15, 39, 63); wherein the memory further comprising

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a plurality of individual RAMs and the packet Tx unit further comprising a plurality of read channels, each of the read channel to read from a different one of the memories, the plurality of read channels arranged in a serial loop within a control unit, the control unit to enter a read address into the loop so that a series of reads are made from each of the read channel units at the read address and to remove address the read address from the loop after each of the read channels have performed their read with a read address (claims 17, 41, 65, 81); wherein, if the packet is to be multicasted, a unique grant is received by the packet Tx unit for each copy of the packet to be send to the switching core, each unique grant having a first number indicating how many copies of the packet are to be sent to the switching core in order to fulfill the multicasting effort (claims 24, 48, 72).

Conclusion

10. Claims 1, 4-5, 8, 16, 25, 28-29, 32, 40, 49, 52-53, 56, 64, 73, 78, 80 are rejected. Claims 2-3, 6-7, 9-15, 17-24, 26-27, 30-31, 33-39, 41-48, 50-51, 54-55, 57-63, 65-72, 74, 76-77, 81 are objected

11. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Erimli et al. (US No. 6,480,500) disclose an arrangement for creating multiple virtual queue pairs from a compressed queue pair based on shared attributes.

Grun et al. (US No. 6,081,848) disclose a stripping packets of data across multiple virtual channels.

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Kagan et al. (US No. 6,243,787) disclose a synchronization of interrupts with data pockets.

Harsen (US No. 6,694,392) discloses a transaction partitioning.

Bell (US No. 6,170,030) discloses a method and apparatus for restreaming data that has been queued in a bus bridging device.

Harsen (US No. 6,557,060) discloses a data transfer in host expansion bridge.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (703) 306-2756. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (703) 305-9656 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Raymond Phan

5/14/04